correspondence for Aug 20th agenda

Fran Zohns to: cr_board_clerk Clerk Recorder 08/09/2013 10:52 AM

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Fran Zohns
Board of Supervisors
San Luis Obispo County
(805)781-5450

Four Sisters Ranch

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Date 8/6/13

AUG - 9 2013

Board of Supervisors
San Luis Obispo County

County of San Luis Obispo

Board of Supervisors

1055 Monterey Street, Room D430

San Luis Obispo, CA 93408

Dear Supervisors,

We have been in the Paso Robles area for about 25 years and we own 3 pieces of property, in Paso Robles and in San Miguel. We intimately know about the drop in the water table having had to lower one of our wells and put in another new well.

We reiterate the points made in letters you have received from **Steve Lohr** of J. Lohr Vineyards & Wines and from **Don Campbell,** 5th District Planning Commissioner, outlining a response to your Proposed Emergency Paso Robles Groundwater ordinance, item #27 on the Agenda for your August 6, 2013 meeting. We urge each of you to carefully review the facts and proposals presented in these two letters.

Clearly the problem needs you to take a *leadership role* to short term and long term SOLUTIONS which ensure the intelligent and efficient resourcing of alternative water sourcing through the mechanism of the formation of a water district, while immediately providing acutely needed water for dry wells through a storage tank/water delivery system while mechanisms are worked out for CSAs (County Service Area) formation and obtaining water from the State Water Project and Lake Nacimiento.

There is NO reason to rush to respond to emotional cries for punitive water rationing which will destroy the economic survival of the area. It is unnecessary. There are very viable solutions when there is cooperation to work with Residents, Businesses and Agricultural interests in a meaningful and open manner, to define step by step how the interim solution can begin immediately as we work out the long term solutions. The drought caused this problem, not vineyards or agriculture use. In fact, the studies clearly show a reduced use of

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water on the land where vineyards replaced other irrigated crops! We grape growers use deficit irrigation techniques. The **drought** has resulted in less water refilling of the aquifers in selected locations. There is and for years has been adequate AVAILABLE SURFACE WATER RESOURCES. Letters on file seem to imply the problem was obvious for years, was "monitored" and simply ignored. Here is your opportunity to either lead to solve the problem, certainly NOT passing the Proposed Ordinance, or step aside and let the land owners create a solution that will provide reliable water for now and the future for all uses. Why are your Water Resources Advisory Committee members not now meeting and brainstorming with those of us affected by the drop in the water table to propose realistic solutions?

If you were to impose the proposed Emergency Ordinances on Agricultural Enterprises then all types of businesses would close up, jobs would be lost, the tax base for even running the government would dry up, the ancillary businesses related to the agriculture, vineyards, farming, ranches, hospitality industry, restaurants, tourism, and support businesses would all be effected. Your proposed ordinances lack intelligent analyses of ultimate outcomes and inappropriateness in their application to agricultural enterprises. You have "no clue" what irreversible harm you would do and how citizens of this community, residential and businesses alike, would suffer. The proposals are short sighted, wrong and just stupid when better solutions exist.

Please listen to a little reason. There are many knowledgeable people available to form a "Manhattan Project" brainstorming how we can best resolve this expeditiously. PRAAGS (PASO ROBLES AGRICULTURAL ALLIANCE FOR GROUNDWATER SOLUTIONS) is one approach and it must be considered as a solution oriented plan option. I would be happy to participate in a Citizens' Committee to meet with the experts in law, hydrology, finance, environmental issues etc. to quickly propose solutions. Open meetings would be welcome by all of us with interests in the ultimate, fair and equitable speedy resolution.

Sincerely yours,

Serena Friedman, M.D.

Serena Friedman, M.D.　　Michael Drucker, M.D.

Four Sisters Ranch -San Miguel　&　Oak Creek Vineyard - Paso Robles

Fw: The County Water Basin Crisis

Cytasha Campa to: cr_board_clerk Clerk Recorder 08/12/2013 08:17 AM

Kindest regards,

Cytasha Campa

Board Secretary

Board of Supervisors

San Luis Obispo County

805-781-4335

----- Forwarded by Cytasha Campa/BOS/COSLO on 08/12/2013 08:16 AM -----

From:	Paul Law <radboss302@sbcglobal.net>
To:	<darnold@co.slo.ca.us>, <fmecham@co.slo.ca.us>
Cc:	<ccampa@co.slo.ca.us>, <ahill@co.slo.ca.us>, <bgibson@co.slo.ca.us>
Date:	08/09/2013 07:30 PM
Subject:	The County Water Basin Crisis

Frank and Debbie

Boy, what a brilliant decision and foresight on your parts to not take immediate and decisive action or implement at least some measures. I understand over 100 new well permits have been issued and climbing since the 6 Aug 13 Board of supervisors meeting. I bet each of you saw that coming while you were deliberating and making your rationalizations to delay. How many more permits do you think will be issued before your next important meeting?

Perhaps you are waiting and praying for that divine intervention from the heavens, and God will make the aquifer basin fill up and be restored for ever.

Please add to your list requiring environmental impact studies before you issue new water permits. Or for anything else you let happen in the county without controls that would have a negative impact on the whole surrounding environment and ecosystem. This is the 21 Century you know.

The whole state is looking at you now. You blew it. You should resign from the seats you disgrace, as you clearly do not have the county and its residents best interests in mind.

Paul Law
Paso Robles, CA

Fw: Ogallala Aquifer

Board of Supervisors to: BOS_Legislative Assistants Only, cr_board_clerk Clerk Recorder 08/12/2013 08:18 AM

Sent by: Cytasha Campa

----- Forwarded by Cytasha Campa/BOS/COSLO on 08/12/2013 08:18 AM -----

From: Dianne <pasodj@aol.com>
To: fmecham@co.slo.ca.us, bgibson@co.slo.ca.us, darnold@co.slo.ca.us, ahill@co.slo.ca.us
Cc: boardofsups@co.slo.ca.us
Date: 08/10/2013 08:52 PM
Subject: Ogallala Aquifer

Dear Board of Supervisors,
Below is a "snippet" from U.C. Davis regarding the destruction of the Ogallala Aquifer.
Please note the comment regarding Amarillo-Lubbock Texas.

Water-conserving methods in irrigated farming and in dryland farming have improved greatly over the past two decades, and the second option is more viable than the first one. Clearly the entire area will revert in the long run entirely to dryland farming, or even back to ranching, but it will do so only as the Ogallala aquifer becomes locally exhausted. There will be a declining population as this occurs, and there will most likely be increased soil erosion and environmental damage. There is no happy ending here, any more than there is when any other mined resource is finally exhausted. The High Plains of Texas have less water left in the Ogallala aquifer than in the other states, but that represents only a matter of time at present rates of depletion, especially as the other states were still increasing their acreages of irrigated land, and their pumping rates, in the late 1970s. **The Extreme Case: The Texas High Plains**. The Texas High Plains is a region of 35,000 square miles, with a rainfall of 14-21 inches. Apart from that, the only major water supply comes from the Ogallala aquifer. Although it once contained perhaps 500 maf under the Texas High Plains, the Ogallala receives only perhaps 0.2 inches per year of recharge in the region. There is practically no available surface water. Therefore, once the Ogallala water is gone, that's it: there is, for all practical purposes, no water for all the Amarillo-Lubbock region. Even these cities pump their municipal water supplies from the Ogallala.
http://mygeologypage.ucdavis.edu/cowen/~gel115/115CH18miningwater.html

Please don't let this happen to North County. The current over pumping and over planting of the groundwater basin will damage it forever. Please don't let big money win.

Heartsick,

Dianne Jackson
Union Road, Paso Robles

CHAPTER EIGHTEEN: MINING WATER

Ground water is contained in specific rock units called **aquifers**. Water, ultimately from rain or snow, percolates downward directly from rain, or from a river bed or lake bed, through soil, sediment, and rock, following the route of least pressure, to reach a level where it is saturated. It is then **ground water**, occupying the microscopic spaces between the rock particles in the aquifer. In natural circumstances an aquifer is close to equilibrium in its water content, with recharge balancing outflow.

The water level in a natural aquifer is called the **water table**. Although it may rise and fall from season to season and year to year, the water table usually varies round some average depth. If the water table reaches the ground surface, water will tend to ooze out, as a natural seep or spring. In the end, every drop of ground water eventually leaves the aquifer by outflow as a natural spring, or as seepage into a lake, river, or the sea, or pumped out of a well; but by that time it has been replaced by other water. Water flow above or below ground follows physical laws that are well understood. In general, ground water flows very slowly compared with the unconfined flows that are familiar in rivers and streams: rates are more of the order of feet per day rather than feet per second.

Even rain water is not pure, and ground water, reacting over long periods of time with the solid and liquids it contacts underground, is likely to be quite impure. Water can dissolve chemicals that it then carries in solution, and it can deposit minerals. In particular, water may have oxygen in solution or not, with very different chemical results. Finally, waters from different sources may mix freely, mingling their load of chemicals as they do so.

Hydrogeology is the study of aquifers and the water contained in them. It is crucial in assessing the impact of human activities on ground water, and in planning for the wise use of water in the future.

In many areas, one cannot simply drill a well into an aquifer and hope to pump out unlimited supplies of water. The water content of an aquifer depends mainly on grain size. Sedimentary rocks may have the particles partly or completely cemented together, leaving little space for water. Uncemented, fine-grained rocks such as silts and clays may be very porous, with nearly 50% of the space available for water. But each little grain of sediment has water attached to it by surface tension, and sometimes by chemical reactions, and normally this water cannot be drained or pumped out. An aquifer made of uncemented medium to coarse sand yields the greatest yield of water, up to 30% of the rock volume in some cases.

The rate of extraction may be limited by poor permeability within the aquifer. If the storage volume or the permeability of the aquifer is low, even locally intense pumping can lead to a rapid fall in the natural level of water in the water table in a **cone of depression**. At a steady rate of pumping, the cone of depression becomes a permanent feature of the water table. Massive rates of extraction from multiple points over a wide area lead to a situation where cones of depression interact to produce a regional drop in the water table, even in the largest and most permeable aquifer.

When pumping from an aquifer extracts water faster than it can be recharged, the system is out of equilibrium, and the water table will continue to drop until recharge increases or pumping decreases. The aquifer is said to be in **overdraft**.

There can be severe geological and economic consequences of overpumping ground water to generate an overdraft. First, of course, any further ground water has to be pumped from deeper and deeper levels, and such water is not only more expensive to extract in terms of deeper wells and more powerful pumps, but is more likely to be chemically poor in quality. As pumping proceeds, the cone of depression of an individual user may intersect the well of another, degrading that neighbor's water supply in quantity, quality, and increased cost.

Second, the drop in the water table indicates that more ground water is being pumped than is being recharged, so that water supplies of the future are being mortgaged for present gain. While this may not be a great concern for an average individual user, it ought to be a concern for administrative agencies.

Third, there are indirect effects of lowering the water table that are more insidious but more damaging. Natural vegetation may no longer be able to put down its roots deep enough to reach ground water, especially if there is a prolonged dry season, and it is degraded. Natural lakes, ponds, and streams tend to dry up, especially if they are fed by direct seepage from the water table. They may also be drained by percolation into the ground, if their beds are permeable. Even artificial canals and reservoirs may lose water to a downdrawn water table. If a cone of depression intersects the coast, or a salt lake, salt water may be drawn into the aquifer, inflicting damage that is costly to mitigate.

Some aquifers are permanently damaged by overdrafting. In rather loosely packed sediments, the grains in the sediment may be held slightly apart by the water film that saturates them, and as that water is extracted the sediment may compact a little. The compaction releases a lot of water, but it is irreversible. The aquifer cannot be recharged to its former water storage capacity, because the compaction has permanently lowered its porosity and permeability of the aquifer. The lost volume may be visible at ground level as permanent subsidence of the land surface. This has happened in several regions of California. Even without compaction, an aquifer that has been depleted deeply may take a long time to recharge, especially in an arid region, and meanwhile chemical or physical changes can alter its characteristics, degrading its performance.

Even if ground water is used and returned to the aquifer through drainage channels, it can be seriously degraded in the process. Water that has been used for irrigation, for example, has been exposed to evaporation, increasing its salinity; it has been in contact with natural or artificial fertilizers, increasing its nitrate content; and it is likely to have been charged with a load of chemical pesticides and herbicides.

When the Wells Run Dry: The Ogallala Aquifer

The High Plains stretch northward from West Texas to Wyoming and South Dakota, and in natural conditions form a dry grassland. There is less than 16 inches of rain a year near the Rockies and in West Texas, but that increases eastward to 28 inches in central Kansas. The rainfall varies a great deal from year to year, however. The steady gradient of increasing rain to the eastward, but varying yearly rainfall, means that the optimal western limit for growing crops such as corn, rather than grazing cattle, shifts each year. This problem is made worse because there is hardly any water surplus: evaporation levels are very close to precipitation levels. Apart from the constraints on farming, this fact means that there is little recharge of ground water from precipitation: ground water percolates only very slowly eastward in underground aquifers from the areas where Rocky Mountain snowmelt recharges them.

Historically, there have been sequences of drought years on the High Plains, followed by sequences of wet years. In wet years, farmers can grow bumper crops without irrigation, but in dry years the natural rainfall can be so low that there is practically no crop yield at all. Summer temperatures are high, and the natural evaporation is increased even more by strong winds that can blow for long periods across the naturally treeless plains.

The rivers that flow across the High Plains (the Platte, the Arkansas, and the Canadian) are generally snow-fed, and have cut their beds into the plains. It was difficult to divert them for irrigation with the simple technology of the 1800s, and early water diversions were built far upstream on the foothills of the Rockies before farmers on the High Plains had the technology to use them. Today they are rather sorry, dried-out versions of the original rivers, over-committed and over-salty.

Early travellers on the High Plains were on their way westward, often to California, and the grasslands of the High Plains became classic cattle country as the buffalo were shot out and ranches were staked out with barbed wire fences. But the 1880s were wet years, and more and more of the High Plains were ploughed into fields. The plains of western Kansas were too dry and hot to grow corn: but in wet years, dry-farming techniques were used to grow bumper crops of wheat that produced far more dollars per acre than cattle ranching (this was the decade of the great wheat boom all over the West).

However, the United States Weather Bureau already had available, for those who would read it, data that indicated the wet years of the 1880s were unusual. As the climate cycle turned to drought, the bust set in, and farming on the High Plains ended in total failure, leaving behind it "a mass of human wreckage in the shape of broken fortunes, deserted farms, and ruined homes," as A. H. Simons wrote in 1906. The US Department of Agriculture warned in 1912 that no "system" of dry-farming could be operated on the Plains: either there had to be irrigation, or the land had to be used for grazing.

However, the High Plains are underlain by an enormous aquifer, the **Ogallala Aquifer**, which consists of thick sands and gravels running in a great north-south belt from Wyoming and South Dakota, through the sand hills of Nebraska, along the eastern border of Colorado and the western half of Kansas, through the panhandle of Oklahoma to northwest Texas. These porous rocks carry an immense amount of water, but it lies too deep to be tapped by early well technology.

Cheap deep drilling for water wells became available only in the 1930s, and powerful submerged electric pumps were invented just as the government provided Federally subsidized installation of electric power on farms all across the Plains. As the United States came out of the Depression years into a highly stimulated wartime economy, farmers were encouraged by cheap loans and strong crop prices to maximize production. Deep drilling and irrigation with Ogallala water became economic options for the first time, but the generally wet years of the 1940s did not require much additional water for irrigation. Some innovative farmers were rewarded for their enterprise by bumper crops, but for many others the natural rainfall gave a good return.

Ogallala water allowed the agricultural transformation of the High Plains in the 1950s. Renewed drought led to major well drilling, especially on the Texas High Plains. With the technology now well established, the water pumped and the acreage irrigated increased dramatically. Center-pivot methods of irrigation were patented in 1952, and spread over much of the High Plains in the 1970s. By the mid-1970s, 12 million acres were irrigated, largely for feed corn, with cotton as a major crop in West Texas. Production of feed grains on the High Plains tripled between 1954 and 1973, and the grains were fed to beef cattle in feedlots all over the Plains.

In 1980 about 170,000 wells were pumping 18 maf/yr (more than the flow of the Colorado River) from the Ogallala Formation to irrigate over 13 million acres, compared with 2 million acres in 1949. The Sand Hills of Nebraska, long a wildlife refuge because crops could not be grown on it, now contained some of the most intensive central-pivot irrigation systems in the United States. 20% of the irrigated land in the United States overlay the Ogallala, 30% of the irrigation ground water in the United States was being pumped from it, and 40% of the grain-fed beef cattle slaughtered in the United States were being fattened in the six states of the High Plains. Large feedlots were set up, and slaughtering and meat-packing centers were built to create a significant economic infrastructure. Kansas is the leading state in the US for wheat production and beef-processing.

All the revolution, however, depended directly on the water pumped from the Ogallala aquifer. At first, of course, water was plentiful. But while pumping rates were reaching 5 or 6 feet per year in some places, the natural recharge from rainfall was averaging about half an inch, and in some areas was negligible. Of course, since the water was pumped out much faster than it was naturally recharged, deeper wells had to be drilled, and pumping became more expensive.

The mathematics is inexorable. An aquifer does not contain 100% water, because the water is held between the grains in the sediment. Surface tension dictates that not all the water can be pumped out: an aquifer yields only a specific yield, which for the Ogallala is 10-20% of its volume in water. Therefore, if a farmer pumps 2 feet of water from the aquifer in a year, and there is negligible recharge, the water level in his well drops about 10-20 feet that year, dropping the yield of the well, and increasing his pumping costs the following year.

The economics of the free market began to affect the depletion rate in some regions of the Ogallala in the 1970s. Water levels dropped about 5 feet a year through the 1950s, 1960s, and 1970s, and pumping costs naturally became a larger factor in farm economics. In 1974 the shock of the dramatic increase in oil prices engineered by OPEC raised all energy prices, and by 1976, pumping costs were at an all-time high compared with crop prices, and continued to rise steadily. Farmers began choosing crops more carefully, and irrigating with more efficient equipment. The cost of irrigation water to the farmer probably rose from about $6 an acre-foot in 1969 to more like $20 an acre-foot in 1977, but in terms of increased production, that acre-foot was worth probably $60.

Farmers used less water per acre on average, and irrigated fewer acres. There were unfortunate aspects: Texas farmers that continued to use irrigation had to plant high-dollar crops because the water had become expensive, and that meant cotton. Cotton cultivation in a dryland area tends more easily to promote soil erosion and nutrient depletion, to the long-term detriment of the soil.

Over the entire Ogallala region, 23 maf/yr were being pumped in 1978, but that had dropped to 18 maf/yr in 1980 (still more water than flows down the Colorado River!). Finally, with the water table dropping precipitously, the end was in sight. The water table dropped more than 50 feet over a large area in the southern High Plains, and dropped more than 200 feet in West Texas. Nebraska, Kansas, and Texas were pumping 88% of all the Ogallala water between them. It became clear that this underground water was not a renewable resource, and that once pumped out, that would be the end of irrigated farming. Even so, the Ogallala was still being pumped at 17 maf/yr in 1991. Were there any institutional options for groundwater conservation? A few states already had in place sound and well-established practices for groundwater management, but the rest either scrambled to patch together rudimentary controls, or simply ignored the problem.

New Mexico overlies only a tiny percentage of the Ogallala, but it was the naturally driest of the Ogallala states, and it had inherited some of the Spanish traditions and laws of water management. In particular, it inherited the tradition that water belongs to the King; or, put into modern democratic terms, to the people. The New Mexico legislature passed a law in 1931 that declared ground water to be public property, that would henceforth be controlled for the public good by the New Mexico State Engineer. It also allowed the establishment of "declared underground water basins" that would be managed rationally as natural regions. By 1955 two such basins were established over the Ogallala aquifer in New Mexico territory.

New Mexico groundwater law is designed to control depletion of ground water in such a way that the costs of developing it can be recovered. It sets a premium on conserving existing developed systems, but will allow new ones provided they have a reasonable expected longevity, and provided they do not interfere drastically with existing uses. Existing users are in general are extended protection against newcomers based on a 40-year lifetime of the underground supply, although they have to recognize that the water table may be drawn down, and their pumping costs may rise dramatically. Kansas passed similar legislation in 1945, but specific controls were not applied until 1978. New wells must be spaced a various defined minimum distances from existing ones, and existing users are protected for a 25-year expected life of the aquifer. This means that no new wells are allowed in badly affected areas. South Dakota declared groundwater to be public property in 1955.

Wyoming and Colorado also had older legislation that effectively put ground water technically under some kind of State administrative control, though mechanisms are complex and legal battles can be protracted.

In 1975 Nebraska allowed local districts to establish Ground Water Conservation Districts that could control new drilling, and limit the amount of water that could be pumped per year per irrigated acre.

Texas had not done much to impose any formal control on groundwater management by 1980. In fact, Texas law specifically protects a landowner against any outside interference with the use of the ground water under his property. Oklahoma passed legislation in 1973 that protected existing users, but did nothing to protect the aquifer against rapid depletion.

The United States Geological Survey (USGS) began intensive research on the Ogallala in 1978. It found that the Ogallala had discharged perhaps 3 maf/yr into springs and rivers before development: this, then, would be a sustainable yield from the aquifer as it used to be, compared with the 1980 pumping rate of 18 maf/yr.

That in itself is not necessarily the kind of news that makes people stop pumping. "I should get mine while it's going," is a typical response that makes sense when one considers that corn or cotton generates much more money than dry farming, and that everyone else has their well down there sucking the water out of the aquifer. If A doesn't pump it out, then B will, because the water law of the West says that the water in an aquifer cannot be owned by anyone: it's yours if you can pump it. How would any individual farmer gain (or even break even) by refraining from pumping water from the Ogallala? Under the options presented to him, only two reasons would make a farmer stop pumping Ogallala water: if pumping costs went so high that even a corn crop couldn't repay them; or if the aquifer were in such bad shape that the pumps couldn't raise enough water. Only then would it make sense refrain from pumping and return to dry farming.

Both of those situations have occurred: former corn country has reverted to sagebrush in areas in West Texas. Wells in Kansas that had been producing 4000 gallons of water a minute (gpm) have dropped to 800 gpm, and the water is used on sorghum rather than corn. Over 700 miles of perennial streams are now seasonally dry in Kansas, as their water seeps away into dry sediments. Some responses are rational and conservative: in some areas of Kansas, farmers limit themselves on an honor system to 2 feet of irrigation water per year. Other reactions are counterproductive: tax breaks that allow farmers a "depletion allowance" on aquifer water only force the general taxpayer to subsidize the faster depletion of the Ogallala by making it possible for a farmer to keep on pumping water after it would normally be a money-losing proposition.

To an individual farmer, the yield from a well is critical. In round figures, a center-pivot system irrigating 160 acres cannot work properly with less than 750 gpm; and an "old-fashioned" irrigation system using ditches or pipes usually needs 10 gpm per acre to be irrigated‹for most crops, 1000 gpm is needed for efficiency. The well must be able to yield these amounts predictably through the irrigation season, which is usually the 90 days of the summer months. Normally, a well cannot do this unless it is drawing water from about 75100 feet of saturated aquifer at the beginning of the season. The Ogallala aquifer, then, will be exhausted for purposes of large-scale irrigation when it is drawn down to, say, about 75 feet of saturated thickness.

Even though there is some decline in the rate of pumping, the geological, hydrological, and mathematical facts are still undeniable. The Ogallala water is fossil water that is being mined, whether it's at 4000 gpm for each well, or "only" 800. It will run out, within a few decades at present rates of withdrawal.

During the 1980s, the aquifer continued to be mined, with negligible recharge. The early 1990s were wetter than normal, and the aquifer recovered slightly in some areas. But in the early years of the next millenium, the Ogallala aquifer will most likely support only about half of the current irrigated acreage. It will become economically rather than physically exhausted when the costs of pumping make further use of it for farming impracticable. Cropland will then revert to dryland farming or pasture. Are there alternative water supplies? Only if they can be delivered to the crops for less than $60 an acre-foot, which represents an average break-even point for the average farmer growing the average crop in the average year. In practical terms, the answer is no: once the farmers have mined the water of the Ogallala, there is no more. The aquifer could possibly have its life extended by methods that would squeeze out the interstitial water from between the grains in the aquifer, but the extension would be brief and the end result the same.

The USGS projected the decline of the Ogallala aquifer under three assumptions

1. Water use continued as at present
2. Water use was diminished by voluntary action
3. Water use was curtailed by government intervention.

Only option 3 made any significant difference to the depletion of the aquifer. It will still be used up within a few generations. All that government intervention can do is to draw down the aquifer slowly enough to buffer society against the worst effects of a sudden and dramatic end to the region's water supplies; and perhaps that's the best that one can expect any government to do in such a situation.

There are really only three rational actions that farmers in the High Plains can take. One is to continue pumping Ogallala water at the current rate, growing high-value crops until the water runs out, if the government allows them to. The other is to try to conserve Ogallala water as much as possible while maintaining a relative high level of yield, to maximize the total yield of crops still to be gathered, even if it is over a longer time: this probably implies a balance between some irrigated farming and some dryland farming. The final choice is to revert conpletely to dryland farming: but this does not make sense while cheap Ogallala water is still available. The choice is not easy, and it may be taken out of local hands in any case.

Water-conserving methods in irrigated farming and in dryland farming have improved greatly over the past two decades, and the second option is more viable than the first one. Clearly the entire area will revert in the long run entirely to dryland farming, or even back to ranching, but it will do so only as the Ogallala aquifer becomes locally exhausted. There will be a declining population as this occurs, and there will most likely be increased soil erosion and environmental damage. There is no happy ending here, any more than there is when any other mined resource is finally exhausted. The High Plains of Texas have less water left in the Ogallala aquifer than in the other states, but that represents only a matter of time at present rates of depletion, especially as the other states were still increasing their acreages of irrigated land, and their pumping rates, in the late 1970s. **The Extreme Case: The Texas High Plains**. The Texas High Plains is a region of 35,000 square miles, with a rainfall of 14-21 inches. Apart from that, the only major water supply comes from the Ogallala aquifer. Although it once contained perhaps 500 maf under the Texas High Plains, the Ogallala receives only perhaps 0.2 inches per year of recharge in the region. There is practically no available surface water. Therefore, once the Ogallala water is gone, that's it: there is, for all practical purposes, no water for all the Amarillo-Lubbock region. Even these cities pump their municipal water supplies from the Ogallala.

So far, Texas farmers have been able to resist all efforts at institutional (governmental) control over pumping rates. The result is that the Texan area of the High Plains has depleted its ground water faster than any other part of the region, and it is here that the depletion will have its earliest and most dramatic effects.

By 1970 the Texas High Plains had become the most intensively irrigated area in the entire region, with about 5 million acres irrigated. Overall, this is about 25% of the entire region, but in some counties 66% of all available land was irrigated, with all the water coming from the Ogallala. Cotton, which requires great quantities of water, occupied 34% of the irrigated land in the 1970s, by far the largest acreage and value of any cultivated crop in the region. Wheat 25%, grain sorghum 23%, and corn 8%, came next, together dominating the irrigated acreage, with soybeans, sunflowers, and other high-value crops being planted also. The rest of the Texas High Plains had another 25% in non-irrigated crops, and 50% given over mostly to raising beef cattle.

Depending on summer rain and temperature, between 5 and 8 maf/yr are pumped from the Ogallala in Texas, though the natural recharge is less than 0.5 maf/yr. This is truly a mining operation that depended on fossil water in the aquifer. Close to a quarter of the available water in the Texas Ogallala had been pumped out by 1980, 110 maf from an original total of around 500 maf: and that meant that the shallowest and cheapest water had gone.The water table had dropped perhaps 20 feet since pumping began, but that's not the main problem. The aquifer has undergone a 25% decrease in saturated thickness over at least one-third of its area, with some areas undergoing a 50% decrease. Already by 1980, only 62 acres were being irrigated from each well, compared with 118 acres in 1958, a sure sign that wells were yielding less water, and that the days of abundant cheap water were gone for ever. The irrigated area of the Texas High Plains, and the amount of water pumped, had not changed between 1970 and 1980: again a sign of that abundant cheap water was no longer available.

Even by 1974, the arithmetic should have been frightening. For example, in Lamb County, Texas, in 1974, there were about 11 maf of water left in the Ogallala aquifer under the county, and the pumping rate of 0.313 maf/yr seemed to indicate a projected lifetime of 35 years or so for irrigation-as-usual in the county. However, only 57% of the county had more than 100 feet of saturated aquifer left, bringing the apparent totals down to about 8.6 maf and 27 years. But an aquifer is (for irrigation purposes) exhausted when it is drawn down below 100 feet of saturated thickness. Lamb County in 1974 actually had only 3 maf of economically available aquifer water, and it was looking at at horizon of 10 years of pumping-as-usual. Because a scarce resource is inevitably managed more carefully as it runs out, the decline would not come about by pumping-as-usual, but even in 1976, the Texas Water Development Board predicted that large-scale irrigation would have become impossible in Lamb County by 2020.

The USGS has predicted that even under present practices, the entire Texas High Plains will only be pumping 3.5 maf/yr by 2020, rather than the 8 maf/yr of 1980. If the Texans permit, or are forced to permit, government measures to conserve water, pumping would probably drop to 2.4 maf/yr by 2020.
The Future of the Ogallala. The 1980s were wetter years than usual, and the very large pumping rates of the 1970s slowed. More efficient irrigation systems gradually came into use, and since much of the irrigable land was already being used, there was not much expansion of irrigation on to new land during the 1980s. Even so, the Ogallala aquifer was still being pumped more than it was being recharged, even if the rate of depletion was slowing.

Based on the situation in 1980, the USGS made predictions for the Ogallala aquifer for 2020 that ought to be frightening for everyone whose living depends on Ogallala water. Almost all the central and southern High Plains would be unable to run center-pivot irrigation by 2020, for example.

Political institutions would be unlikely to respond to a depletion date forty years into the future. But some of the symptoms of depletion were becoming obvious to the farmers on the High Plains. The water level in their wells was dropping, and their pumping costs were rising. Therefore, institutional controls that would have been unthinkable in the 1950s were accepted in the 1980s, and they too helped to slow the depletion of the aquifers. Farmers responded to the economics of water pumping costs by cutting down, and some land went out of irrigation into dry farming.

In the late 1980s the water level of the Ogallala aquifer was dropping at about a foot a year, overall. There was a patchy distribution of changes in water levels, however: some districts had had severe falls, others had had rises.

The slower pumping of the 1980s was not a temporary moratorium while the wells recovered: the Ogallala water, once pumped, is essentially gone for ever. There is little prospect of Federal help to bring water to the High Plains from another region into the Ogallala: the capital cost would be enormous, and the reservoir of goodwill toward the American farmer on the Ogallala is drawing down as fast as the aquifer is being pumped. Schemes of the 1970s that would tap Canadian rivers as far north as the Mackenzie will not be translated into reality before the Ogallala water runs out, if ever.

Arizona

Arizona is one of the driest States in the nation. Only the central highlands receive more than 30 inches a year, the minimum rainfall that is needed to maintain more than a desert flora and fauna in this latitude, and only the central highlands have year-round streams. Elsewhere, streams flow only after rain. Even then, almost all of that water is lost: 95% of rainfall evaporates or is transpired into the air by plants. Almost all the people live in the desert lowlands, and, of course, almost all crops must be irrigated.

The Hohokam Indians of the Phoenix area built an extensive canal system, the largest in North America before European arrival, with perhaps more than 500 km of major channels and 1600 km of smaller canals, based on the various tributaries of the Gila River/Salt River drainage. This is an area prone to catastrophic flooding (most recently in 1980!), and the canals show traces of damage and repair. The Pueblo Grande canals upstream of Phoenix date from the Hohokam Classic Period (11501450), and are the largest known from pre-Columbian North America. They probably used a significant proportion of the water available in the Salt River. Without upstream flood control or upstream reservoir capacity, the canals were presumably used mainly for capturing and distributing some of the spring run-off. If so, they were directed mainly at increasing the acreage and productivity of the springtime crops, rather than attempts to grow any major summer crop: large areas of dry farming fields are known.

The first European settlers in the Salt River valley realized they needed irrigation. Jack Swilling organized the construction of a "community ditch" in 1868, with 12 men and $10,000 capital: but this was in fact dug by excavating an abandoned Hohokam canal. By 1871 the system provided 200 cfs, and supplied 4000 acres. By 1890 there were 11,000 people in the valley, and canal-and-ditch companies were established over most of the valley floor, all based on the Salt River. Hay, grain, and fruit crops were grown, and the arrival of the Southern Pacific Railroad in Phoenix in 1887 brought in more settlers and took out produce to distant markets.

By the 1890s, more water was claimed from the river than flowed in it, and lawsuits over water rights

Agenda Item No: 13 ▪ Meeting Date: August 27, 2013
Presented By: Diane Jackson
Rec'd prior to the meeting & posted on: August 21, 2013

became rife. However, there was no capital to install any major water conservation or delivery project until the passage of the Newlands Reclamation Act in 1902. This meant that Federal funding would be available for building a dam on the Salt River, provided that existing local water interests could agree on the future management of the project. The negotiations were not easy: it was difficult to combine the Federal view of funding the greatest good for the greatest number of people with the Salt River water-owners' view of their property rights.

The Government began building roads in 1903, bought the damsite in 1904, and bought out the old canal companies in 1906. The Bureau of Reclamation engineers had never built a dam the size of the proposed Roosevelt Dam. The dam site was in rather inaccessible terrain. It was cheaper to build a cement mill at the site than to haul it in; it was cheaper to build a smaller hydroelectric plant on site than to haul in oil to fuel generators; and it was cheaper to build a saw mill and cut trees from thirty miles away than to haul construction timber in from outside. 112 miles of permanent new road were built, and a new town of Roosevelt was built to accommodate the engineers and laborers. Construction was delayed by inexperience, labor problems, floods, and bad roads, but the dam reached 150 feet in 1909, and was completed in 1910. The entire project was completed in 1911, and the reservoir was filled to capacity by 1916. The cost overruns on the project persuaded Congress to extend the repayment period over 20 years rather than 10.

Modern Water Management.‹Few rivers in Arizona are available for damming. The Gila flows as a perennial stream into Arizona from the mountains of New Mexico, and 100 years ago used to flow in most years to the Colorado. In 1911 the Roosevelt Dam was completed on its tributary, the Salt River, and in 1928 the Gila itself was impounded by Coolidge Dam. Now the Gila is usually dry in summer below Coolidge Dam. Arizona diverts a total of 1.3 maf/yr from it, and no water now reaches the Colorado down the river except in peak floods: essentially, no water reached the mouth of the Gila between 1941 and 1979. The Salt River is a perennial stream only as far as a system of four dams that control its flow, and about 1 maf/yr of Salt River water are used to help supply Phoenix and irrigation in the Salt River Valley. Flow in the Salt River at Phoenix is so rare that a major highway through the city has been built in the dry riverbed, near the site where a water-powered flour mill operated in 1899.

Ground water is the only reliable water source over most of Arizona. Almost half of the State's water is drawn from ground water, which is distributed in several dozen smaller isolated alluvial basins rather than sitting in large regional aquifers. The original quantities of water in the basins were large, although the natural turnover is quite small. Therefore, Arizona's aquifers could provide limited quantities of water for a very long time, or a lot of water for a very short time.

As cheap power became available for pumping after World War II, Arizona's dependence on ground water remained just as absolute, but the withdrawal rates from underground supplies increased greatly. Pumping statewide rose from 1.5 maf/yr in 1940, to 1.7 maf/yr in 1942, 3.8 maf/yr in 1952, and by 1953 had reached a plateau at about 4.8 maf/yr. This rate of pumping was sustained over the next thirty years, and the level is still about 3.3 maf/yr, despite the fact that it is being pumped from deeper and deeper levels in the aquifers. Pumping in some basins represents 100 times the natural recharge. Natural recharge, and recharge by percolation of irrigation water still leave an enormous overdraft on the ground water supply, amounting to about 2.2 maf/yr. Over 70% of the State's groundwater is pumped for irrigation, with the rest used for municipal supplies, and industrial uses such as mining. One infuriating aspect of the agricultural irrigation is the wasteful management: probably 40% of the water seeps from unlined canals, evaporated, or percolates below the roots of the plants.

Of the State's 2.2 maf/yr groundwater overdraft, about 1.8 maf/yr were pumped in only three counties, Maricopa, Pinal, and Pima counties. These overdrafts reflect the demands of the metropolitan areas of Tucson and Phoenix, and irrigation in the valleys around these cities. The Willcox Basin, in Cochise

County, has a further 0.3 maf/yr overdraft, primarily for irrigation.

The ground-water overdraft has dropped the water table 400 feet in some areas, including the Salt River Valley near Phoenix, and nearly 500 feet in the lower Santa Cruz Basin. Compaction of aquifers has caused ground subsidence of over seven feet. But Arizona's most serious problem is the high salinity level of its ground water. These levels are mostly natural because of the climate: many of the aquifers receive water that has percolated through salty sediments. But the problem has been exacerbated by human uses. Arizona's water usually exceeds the US Public Health and EPA standard of 500 mg/l dissolved solids in the major populated areas around Yuma, Phoenix, and Tucson, and human-induced contamination is a concern in those areas too. For example, nitrates and pesticides are added to the groundwater from agricultural run-off. In addition, there are often severe local problems from excessive fluorine, chromium, arsenic, barium, and boron.

The Arizona Groundwater Management Act was passed under pressure from the Federal Government in 1980 after it became clear that Arizona law could not prevent overpumping of ground water. The new law was necessary if the State was to survive another century of ground-water mismanagement. The first provision was to require the State to set up a State Department of Water Resources for the first time!

The Act also set up four AMAs (Active Management Areas) in the regions worst affected by groundwater overdrafts (including the Phoenix, Tucson, and Prescott areas). In AMAs, ground-water overdrafts had to be cut to zero by 2025. For many communities, this can be achieved by slow growth and strict water management. But Tucson (as well as Phoenix) has already outgrown any conceivable way to meet the goals of the Act without massive water imports, and present growth projections suggest that the local population in the two major Arizona metropolitan areas will double at least by 2025. Even some of the apparently obvious ways to reclaim used water are not available: for example, experiments to use municipal sewage for irrigation caused increased levels of nitrate in the groundwater.

The Federally funded Central Arizona Project is the last chance for these Arizona cities to get their water management under control. The CAP provides a massive infusion of Colorado water into these desert communities and irrigated areas. But this supply too is finite. The average diversion of Colorado River water is to be 1.2 maf/yr, that is, it will not even match the present-day ground-water overdraft. It is the first major Federal project designed to salvage existing but doomed irrigation projects, rather than bringing new areas under irrigation: no new ground is to be irrigated, and every acre-foot of Colorado water must be balanced by discontinuing one acre-foot of groundwater pumping. Furthermore, CAP water is costly, and has salinity problems. It is pumped uphill from the Colorado at Lake Havasu to the Phoenix and Tucson areas.

In the last resort, the regional water managers will buy up water rights in order to supply the cities, sharing the cost among the users. It seems increasingly likely that this will happen. The result will be that agricultural irrigation will be diminished, and that farmlands will revert to desert. (The transition back to desert vegetation will be slow, because the ecosystem has been disturbed so much.) The Arizona cities will then become, even more than they are now, oases, dependent on import of massive quantities of food, water, fuel, and all other economic supplies for their existence and that of the millions of their inhabitants. **Tucson**.‹Tucson receives only 11 inches of rain, but has long been able to rely on ground water, supplied from aquifers in the sand and gravel of the desert lowland valleys. By 1940 Tucson was large enough to begin to deplete these underground sources faster than they recharged, and the Santa Cruz River has not flowed as far as Tucson since the mid-1940s. The city was allowed to grow at a phenomenal rate, with nearly 7 square miles a year being converted to "high-intensity use," that is, urban residential areas. Tucson reached 500,000 people by 1986, supplied with water by mining underground reserves.

About 80% of Tucson's water comes from wells along the dry Santa Cruz River and from the upper Santa Cruz Basin. The rest is piped from wells in adjoining valleys, the Avra Valley and Altar Valley basins. The Avra Valley used to be irrigated farmland, but was bought by the city for the water rights, and the farmlands were abandoned. The Altar Valley was very sparsely populated, and the same draconian measures were not necessary. Even in the late 1970s, Tucson was mining the underground aquifers on a drastic scale: it used 316,000 acre-feet a year, of which 311,000 acre-feet were overdraft on those supplies. But many farm wells were simply pumped to meet demand, and no-one measured the actual amounts, so the overdraft may be even worse than that.

If the estimates are correct, and the estimates of the volumes of water in the aquifers are correct, then Tucson's current groundwater reserves will last 90 years (of course, costs of pumping would become prohibitive before that time). In other words, there is no way that Tucson can envisage a secure future unless it receives new water supplies; and the explosive municipal growth that still continues will seriously shorten that time horizon. For example, the expected population of the Tucson water management area in 2025 is 1,600,000, four times as much as it was in the late 1970s. The arithmetic is very simple.

Tucson will soon be connected with the Central Arizona Project, and will begin to receive water from the Colorado River. But it will be water of rather high salinity, and it will be expensive. Tucson will have to pay about $250 per acre-foot of water delivered to it along the CAP, compared with $45 per acre-foot for the water that it mines from local valleys.

What can Tucson do? Whatever else it does, it must make the water last longer by conservation. Residences use 80% more water in the summer than they do in the fall, and most of this is for watering lawns. The numbers are less for city use, and for apartments and businesses, but their summer use is high for municipal parks and golf courses, and for cooling. Indoor use for toilets and washing produces waste water that the city can process and partially reuse. But if Tucson is to conserve an appreciable percentage of its water, the outdoor uses must be curtailed. Overall, about 25% of outdoor use is for cooling, and the rest is for lawns, pools, parks, and golf courses.

The only way that the Tucson area can meet its mandated target of balancing recharge and groundwater pumping is by re-using all its sewage water (though no city in the United States has yet done this), and by eliminating all outdoor green areas within metropolitan limits. I think this is politically and psychologically impossible.

Therefore, the logic is inescapable: there are only two alternatives. The first is that Tucson must stop growing. This would require political courage, and conscious decisions to limit growth on the part of Arizona in general and Tucson in particular: therefore it is an unlikely outcome. Tucson citizens currently accept rather weak water conservation programs because they believe that water conservation will free up water supplies to promote the city's further growth.

The more likely possibility is that the 1980 Arizona Groundwater Management Act will be evaded. This could be done by fudging figures, just as Congress evades legal restrictions on Federal spending. Already the calculations are allowed to discount water lost from the Tucson AMA by natural plant evaporation and by outflow. Or the Act could be weakened by subsequent legislation. This will be the politically easy decision, because it will allow Tucson to grow, even at a limited rate, and will eke out the underground water for a long enough time to dump the ecological and economic disaster safely into the hands of our grandchildren or great-grandchildren. Tucson will then be able to exist for a few more decades until the geological imperatives of Arizona's ground water supplies catch up with it.

Even on the most optimistic projections, Tucson is destined to become a city in a true desert. Farmers will be priced out of irrigation projects before residential homes are priced out of lawns. This will add to the environmental degradation within the city, adding dust to the increasing air pollution.

To:	Frank Mecham/BOS/COSLO@Wings, Bruce Gibson/BOS/COSLO@Wings, Adam Hill/BOS/COSLO@Wings, Debbie Arnold/BOS/COSLO@Wings,
Cc:	Cherie Aispuro/BOS/COSLO@Wings, Debbie Geaslen/BOS/COSLO@Wings, Hannah Miller/BOS/COSLO@Wings, Jennifer Caffee/BOS/COSLO@Wings, cr_board_clerk Clerk Recorder/ClerkRec/COSLO@Wings, Cytasha Campa/BOS/COSLO@Wings,
Bcc:	
Subject:	Fw: District 1 - Contact Us (response #271)
From:	Vicki Shelby/BOS/COSLO - Wednesday 08/14/2013 03:48 PM

Vicki M. Shelby
Legislative Assistant for
First District Supervisor Frank R. Mecham
1055 Monterey St., D430
San Luis Obispo CA 93408
(805) 781-4491/FAX (805) 781-1350

email: vshelby@co.slo.ca.us

"Thinking a smile all the time will keep your face youthful" - Frank G. Burgess
"Wrinkles should merely indicate where smiles have been" - Mark Twain

----- Forwarded by Vicki Shelby/BOS/COSLO on 08/14/2013 03:47 PM -----

From:	"Internet Webmaster" <webmaster@co.slo.ca.us>
To:	"vshelby@co.slo.ca.us" <vshelby@co.slo.ca.us>
Date:	08/13/2013 12:43 PM
Subject:	District 1 - Contact Us (response #271)

District 1 - Contact Us (response #271)

Survey Information

Site:	County of SLO
Page Title:	District 1 - Contact Us
URL:	http://www.slocounty.ca.gov/bos/District_1/District1ContactUs.htm
Submission Time/Date:	8/13/2013 12:42:42 PM

Survey Response

Name:	Derek Proffitt
Telephone Number:	
Email address:	derekjproffitt@yahoo.com
Comments or	Regarding the upcoming vote regarding new wells in Paso Robles. We are a young couple planning to buy an existing residential lot in the Geneseo area of rural Paso Robles. We want to build a small home, start a family and join the community we have grown to love. If new residential wells are restricted, our ability do so will be gone. PLEASE - do not

questions (8,192 characters max):	restrict wells on lots already zoned for residential. We are looking to buy in an established tract. If lots like the ones we are looking to purchase can't drill a well, not only will we be affected, but every landowner will be sitting on property that is virtually unsellable until this gets resolved. The people of Paso Robles are what makes this such a great community - please keep us in mind when considering your vote on the 27th. Thanks for your time!

To:	BOS_Legislative Assistants, cr_board_clerk Clerk Recorder/ClerkRec/COSLO@Wings,
Cc:	
Bcc:	
Subject:	Fw: Contact Us (response #2391)
From:	Board of Supervisors/BOS/COSLO - Friday 08/16/2013 08:09 AM
Sent by:	Cytasha Campa/BOS/COSLO

----- Forwarded by Cytasha Campa/BOS/COSLO on 08/16/2013 08:09 AM -----

From:	"Internet Webmaster" <webmaster@co.slo.ca.us>
To:	"BoardOfSups@co.slo.ca.us" <BoardOfSups@co.slo.ca.us>
Date:	08/15/2013 03:24 PM
Subject:	Contact Us (response #2391)

Contact Us (response #2391)

Survey Information

Site:	County of SLO
Page Title:	Contact Us
URL:	http://www.slocounty.ca.gov/bos/BOSContactUs.htm
Submission Time/Date:	8/15/2013 3:24:12 PM

Survey Response

Name:	Bob & Susan Krivacek
Telephone Number:	
Email address:	Twinfawns@Wildblue.net
Comments or questions (8,192 characters max):	Heard yesterday that Vina Robles purchased 3 large ranches in the San Miguel area and plan to develop them into large vineyards. Enough is enough. Our water supply is critical and 900 ft. wells with 200 hp pumps have gone in all around us (mostly Castoro). Too late to stop them, but something must be done NOW to stop more planting and development. Please help us. We are not in the "red zone" and our well is dropping 15 ft a year since 2009 with Castoro's big plantings. That "red zone" is spreading.

To: BOS_Legislative Assistants, cr_board_clerk Clerk Recorder/ClerkRec/COSLO@Wings,
Cc:
Bcc:
Subject: Fw: Contact Us (response #2393)
From: Board of Supervisors/BOS/COSLO - Monday 08/19/2013 08:34 AM
Sent by: Cytasha Campa/BOS/COSLO

----- Forwarded by Cytasha Campa/BOS/COSLO on 08/19/2013 08:34 AM -----

From: "Internet Webmaster" <webmaster@co.slo.ca.us>
To: "BoardOfSups@co.slo.ca.us" <BoardOfSups@co.slo.ca.us>
Date: 08/16/2013 06:11 PM
Subject: Contact Us (response #2393)

Contact Us (response #2393)

Survey Information

Site:	County of SLO
Page Title:	Contact Us
URL:	http://www.slocounty.ca.gov/bos/BOSContactUs.htm
Submission Time/Date:	8/16/2013 6:10:58 PM

Survey Response

Name:	Rebecca L Adams
Telephone Number:	
Email address:	becky@beckyadams.com
Comments or questions (8,192 characters max):	What is the delay? The time to initiate an IMMEDIATE moratorium on all water drilling permits is NOW..and, by the way, make it retroactive. I have been reading all of the newspaper reports for a while now. Three years ago I became aware of wells going dry out in the East 46 area; I am a Realtor and at least one house was being foreclosed on because of well failure. Its time to take drastic action.

To: BOS_Legislative Assistants, cr_board_clerk Clerk Recorder/ClerkRec/COSLO@Wings,
Cc:
Bcc:
Subject: Fw: Contact Us (response #2394)
From: Board of Supervisors/BOS/COSLO - Tuesday 08/20/2013 08:26 AM
Sent by: Cytasha Campa/BOS/COSLO

----- Forwarded by Cytasha Campa/BOS/COSLO on 08/20/2013 08:26 AM -----

From: "Internet Webmaster" <webmaster@co.slo.ca.us>
To: "BoardOfSups@co.slo.ca.us" <BoardOfSups@co.slo.ca.us>
Date: 08/19/2013 08:37 PM
Subject: Contact Us (response #2394)

Contact Us (response #2394)

Survey Information

Site:	County of SLO
Page Title:	Contact Us
URL:	http://www.slocounty.ca.gov/bos/BOSContactUs.htm
Submission Time/Date:	8/19/2013 8:36:54 PM

Survey Response

Name:	Laurie Gage
Telephone Number:	
Email address:	fullsail@onemain.com
Comments or questions (8,192 characters max):	Regarding the Paso Robles Groundwater Basin Management issue, I strongly urge all four of you to stand together and protect all users of the basin by adopting an emergency ordinance prohibiting any new plantings of grapes, conversion of dryland farms, new well permits (excluding permits for replacement of wells gone dry or in imminent danger of going dry), and any new development. This would allow time to develop a concensus plan by the users that works equally well for all. It is unfair to put the management of the district into the hands of the largest landowners via the process being suggested by PRAAG, especially since the largest of that group are not local to our area and could walk away from a dry well more easily than a rural residential landowner, whose property would be valueless and unsaleable. Please do something now to protect us all in the long run. Thank you.

To: BOS_Legislative Assistants, cr_board_clerk Clerk Recorder/ClerkRec/COSLO@Wings,
Cc:
Bcc:
Subject: Fw: paso robles ground water basin
From: Board of Supervisors/BOS/COSLO - Tuesday 08/20/2013 09:54 AM
Sent by: Cytasha Campa/BOS/COSLO

----- Forwarded by Cytasha Campa/BOS/COSLO on 08/20/2013 09:54 AM -----

From: Bev Michels <alcearoseafarm@gmail.com>
To: darnold@co.slo.ca.us fmecham@co.slo.ca.us ahill@co.slo.ca.us bgibson@co.slo.ca.us
Cc: boardofsups@co.slo.ca.us
Date: 08/20/2013 09:53 AM
Subject: paso robles ground water basin

> Aug. 20 , 2013
>
> Dear San Luis Obispo Board of Supervisors:
>
> I am writing to express my concern over the use and regulation of
> the Paso Robles Ground Water Basin.
>
> In the past 18 months, three of our neighbors' wells have gone
> dry. My husband and I are very concerned that it is only a matter
> of time until we become the next victim of this cancer that is
> sucking the life out of our ground water supply.
>
> We reside on a rural residential 5-acre parcel in the East Side of
> Templeton. We purchased the property in 2000. At that time we were
> guaranteed that there was an "infinite" supply of ground water
> under our five acres.
>
> Four years ago, we began a goat dairy and farmstead creamery. Our
> micro-dairy is licensed and regulated by the Ca. Dept of Food and
> Agriculture/ Milk and Dairy Food Safety Branch. In 2009 and our
> dairy inspector informed us that the quality of our ground water was
> about the best he had ever seen. Not so much anymore - while our
> water still passes inspection - the quality is far from what it was
> four years ago.
>
> The quality of the water that my eight dairy goats drink every day
> influences the quality and taste of their milk. The quality of
> their milk directly impacts the quality and flavor of my cheese.
>
> There is so much at stake - lives, businesses, careers and
> dreams. All are on the cusp of being shattered.
>
> I encourage you to adopt an urgency ordinance. It is critical to
> take a "time out" so professionals can evaluate the situation and
> hopefully come up with a realistic solution for all.
>
> Thank you for listening and for your consideration of my concerns.
>
> Sincerely,
> Bev Michels
> Alcea Rosea Farm
>
> Templeton Ca 93465
>